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10/731,186	12/09/2003	Tetsuji Ueda	52201-0611	4872
28481	7590	03/25/2005	EXAMINER	
TIAJOLOFF & KELLY			HERRING, LISA L	
CHRYSLER BUILDING, 37TH FLOOR			ART UNIT	
405 LEXINGTON AVENUE			PAPER NUMBER	
NEW YORK, NY 10174			1731	

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/731,186

Applicant(s)

UEDA ET AL.

Examiner

Lisa Herring

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 46-65 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 46, 47 and 49-65 is/are rejected.
- 7) ☒ Claim(s) 48 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/997,222.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy for Japan 2000-365349 has been filed in parent Application No. 09/997222, filed on November 28, 2001.
2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on September 3, 2001. It is noted, however, that applicant has not filed a certified copy of the Germany 101 42 893.6 application as required by 35 U.S.C. 119(b).

Drawings

3. Figures 2(B) and 3(B) should be designated by a legend such as --Prior Art-- because only that which is old is illustrated, as disclosed by the applicant on pg. 15, line 30 and pg. 16, line 4, respectively. See MPEP § 608.02(g).
4. Figure 4, label "14c" based on pg. 20, line 21 of the specification should be labeled "14a".
5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 10a (pg. 17, line 2).

Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so

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as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The specification is objected to because reference character "14c" has been used to designate both "the bottom wall" and "the upper wall" on pg. 20, line 28 in the specification. Examiner recommends changing "upper wall 14c" to "upper wall 16c" to be consistent with the drawings.

Appropriate correction is required.

Claim Objections

7. Claim 57 is objected to because of a grammatical error in the 1st line of the claim, "upper an lower". Examiner suggests changing the phrase to read as "upper and lower".

Claims 50, 51, and 60 are objected to because of the following grammatical errors: the phrases "to inward position" and "to inward distance" in the last line of the claims. Examiner suggests changing the phrases as follows: "to an inward position" and "to an inward distance".

Appropriate correction is required

Claim Rejections - 35 USC § 102/103

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 46, 47, 49, 52, 53, 54, 57, 58, 59, are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Blankenbecler et al. (5,236,486).

11. Regarding claims 46, 47, and 57, Blankenbecler discloses a method for producing an optical member of quartz glass, said method comprising:

a) providing a blank (Figs. 3d, 3e, and 3f), which includes a contour portion that can be used for the contour of the optical member to be produced (Col. 6, line 65 to Col. 7, line 15) and an overdimension portion (Fig. 2c and Col.6, line 65 to Col. 7, line 15) that has a surface which is defined by a lower side, an upper side opposite said lower side and spaced apart therefrom, and an outer edge extending around a center axis, (claim 46)

b) alternatively, providing a blank comprising a contour portion for the contour of the optical member to be produced and an overdimension portion surrounding the contour portion, said overdimension portion having a center axis, a lower portion, an upper portion opposite said lower portion and spaced apart therefrom, and an outer edge extending around the center axis, (claim 57)

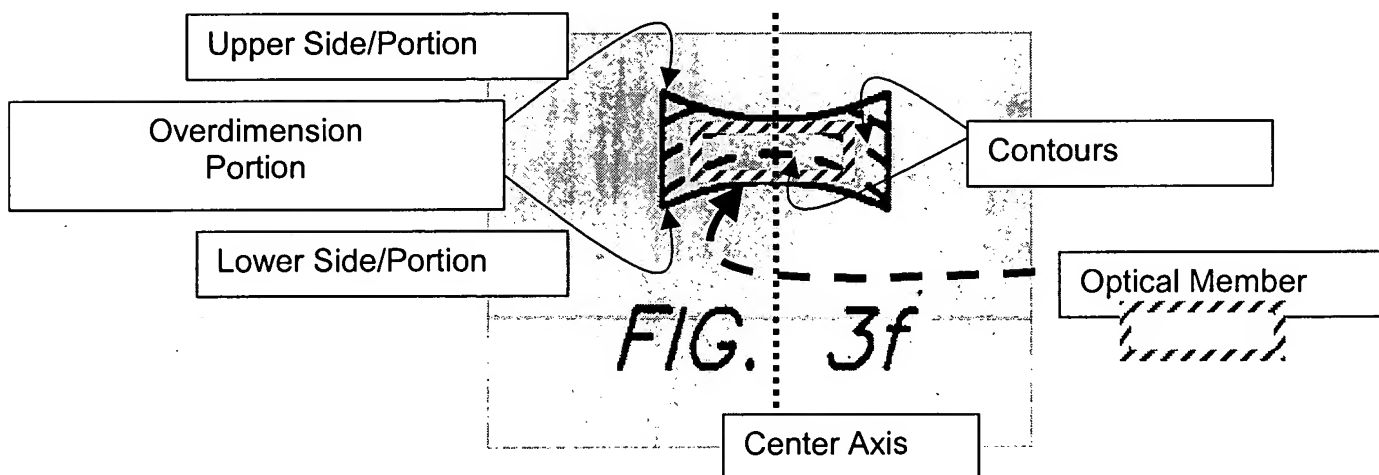
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c) subjecting said blank to a thermal treatment by annealing after slumping or forming ; and (Col. 7, lines 8-15 and Col. 8, line 58 to Col. 9, line 5) (Claims 46 & 57)

subsequently cooling the blank, (Col. 8 line 58 to Col. 9, line 5) (Claims 46 & 57)

removing the overdimension portion so as to expose the optical member (Figs. 2c and 2d and Col. 6, line 65 to Col. 7, line 8) (Claims 46 & 57); and

d) using a preform wherein the overdimension portion includes a thickened portion which extends from the outer edge towards the center axis, the thickened portion varying in thickness so that the distance between the lower side and the upper side in an area adjacent the outer edge is greater than the distance between the lower side and the upper side in an area of the center axis (claim 48) (See Fig below and Col. 6, line 65 to Col. 7, line 8)



Blankenbecler fails to specifically disclose the measures provided which, during cooling, keep conduction in an area adjacent said outer edge lower than in an area adjacent said center axis and the measures comprise use of a preform as the blank wherein said overdimension portion includes a thickened portion which extends from

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said outer edge towards said center axis; said thickened portion varying in thickness so that the distance between the lower side and the upper side in an area adjacent the outer edge is greater than the distance between the lower side and the upper side in an area of the center axis. However, since the blank disclosed by Blankenbecler (See Figure above) includes all of these limitations, it is inherent in the process of annealing and cooling the blank 3f in Blankenbecler, that measures are provided, during cooling, keep conduction in an area adjacent said outer edge lower than in an area adjacent said center axis (claim 46) or alternatively, heat conduction from the contour portion adjacent said outer edges is limited more than adjacent said center axis. If applicant interprets this is not inherent in the process of Blankenbecler when applied to blank 3f, it would have been obvious to one skilled in the art at the time the invention was made that the additional mass at the edges of blank 3d, 3e, or 3f will keep conduction in an area adjacent said outer edge lower than in an area adjacent said center axis (claim 46) or alternatively, heat conduction from the contour portion adjacent said outer edges is more limited than adjacent said center axis.

It should be noted here that in the remainder of the rejections for the claims listed mentions the specific figure that with the disclosure in Columns 6 and 7 one skilled in the art could anticipate the following rejections:

Regarding claim 49, the method according to claim 47, wherein the distance between lower side and upper side across said thickened portion decreases continuously inwardly towards said center axis, please see Figs. 3d, 3e, and 3f.

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Regarding claims 52 and 53, the method according to claim 47 or 49, wherein said thickened portion begins at said outer surface, please see figures 3d, 3e, and 3f.

Regarding claims 54 and 55, the method according to claim 47 or 49, wherein said thickened portion extends from said center axis to said outer surface, please see figures 3d, 3e, and 3f.

Regarding claim 56, the method according to claim 47, wherein said thickened portion is adjacent the upper side and a second thickened portion is provided adjacent the lower side, both of the thickened portions being thicker outwardly of the blank than in the area of the center axis thereof, please see figure 3f.

Regarding, claim 58, the method according to claim 57, wherein at least one of the upper or lower portions of the overdimension have different thicknesses adjacent the center axis and adjacent the outer edge, the thickness thereof adjacent the center axis being less than the thickness adjacent the outer edge, please see Figures 3d and 3e.

Regarding claim 59, the method according to claim 58, wherein said one of the upper or lower portions of the overdimension portion continuously decreases in thickness adjacent the outer edge to the thickness adjacent the center axis, please see Figures 3d and 3e.

Regarding claim 62, the method according to claim 57, wherein the upper and lower portions of the overdimension portion each have different thicknesses adjacent the center axis and adjacent the outer edge, the thicknesses thereof adjacent the center

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axis being less than the thicknesses thereof adjacent the outer edge, please see Figure 3f.

Regarding claim 63, the method according to claim 62, wherein the upper and lower portions of the overdimension portion each continuously decrease in thickness from the thickness thereof adjacent the outer edge to the thickness thereof adjacent the center axis, please see figure 3f.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 50, 51, and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blankenbecler et al. (5,236,486) as applied to claim 49 above, and further in view of Blankenbecler et al. (5,236,486). Blankenbecler discloses several different concave curves in Figures 2b, 3d-3f, 4b, and 5 and also discloses (Col. 7, lines 1-7) various combinations of planar, concave, and convex surfaces may be employed in the fabrication of the optical member 10'. Blankenbecler fails to specifically disclose in the figures the method according to claim 49 a blank, wherein said distance decreases faster than linearly relative to an inward position on the blank or wherein said distance decreases linearly relative to an inward position on the blank and the method according to claim 59, wherein said thickness decreases in a linear relation to an inward distance

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of the portion. However, Blankenbecler discloses multiple concave curves, Figs. 3d, 3e, and 3f, in a blank, which decreases slower than linearly relative to inward position of the blank, a single concave curve Fig. 4b, which decreases faster than linearly relative to inward position of the blank, and a single concave curve which decreases linearly relative to an inward position on the blank. Therefore, single or multiple concave curves (Figs. 3d-3f) could be utilized in the blank in the method of Blankenbecler, wherein the curves can decrease slower than linearly relative, faster than linearly relative, or is linearly relative to inward position of the blank. Accordingly, it would have been obvious to one skilled in the art at the time the invention was made in the method of claim 49 or 59, as disclosed by Blankenbecler in the rejections above to use multiple concave curves, which would produce the following: wherein said distance decreases faster than or is linearly relative to an inward position on the blank or wherein said thickness decreases in a linear relation to an inward distance of the portion, for the advantage of providing multiple design options based on customer's wants or needs.

14. Claims 61, 62, and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blankenbecler et al. (5,236,486) as applied to claims 57 or 59 above, and further in view of Yamamoto et al. (5,822,134). Blankenbecler et al. fails to disclose the method according to claim 59, wherein said thickness decreases at least in part at a greater than linear relation to an inward distance or the method according to claim 62, wherein said thicknesses decrease at least in part at a greater than linear relation to an inward distance of the portion, so that the upper and lower portions each has an outwardly concave shape. However, Yamamoto discloses, Fig. 4, a blank for an optical

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lens, which was press molded, wherein the thickness in the overdimension portion decreases at least in part, it is not at a greater than linear relation to an inward distance of the portion, but as discussed in the rejections of Claims 50, 51, and 60 above different types of concave curves can be utilized, such as a curve with a greater than linear relation to an inward distance. Utilization of this type of curve to the base shape of Yamamoto will create overdimension portions with an outwardly concave shape. Since, Blankenbeclar discloses press molding (Col. 7, lines 7-15), as an alternative option to slumping (Col. 8, lines 58-65) for forming the contours in the blank it would have been obvious to one skilled in the art at the time the invention was made to anneal, cool, and remove the overdimension portions in the alternate shape disclosed by Blankenbecker in view of Yamamoto. Accordingly, it would have been obvious to one skilled in the art at the time the invention was made to make an optical member out of the shape disclosed by Yamamoto in the process of Blankenbeclar wherein:

a) the thickness decreases at least in part at a greater than linear relation to an inward distance of the portion, so that the portion has an outwardly concave shape,

b) the upper and lower portions of the overdimension portion each have different thicknesses adjacent the center axis and adjacent the outer edge, the thicknesses thereof adjacent the center axis being less than the thicknesses thereof adjacent the outer edge, and

c) the thicknesses decrease at least in part at a greater than linear relation to an inward distance of the portion, so that the upper and lower portions each has an outwardly concave shape,

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for the advantage of providing multiple design options based on customer's wants or needs.

Allowable Subject Matter

15. Claim 48 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. The following is a statement of reasons for the indication of allowable subject matter: The closest prior art Ueda et al. (6,578,382) JP 08-091857, JP63-218522, Miyaura (5,720,791), Mashige (5,601,627), and Yamamoto et al. (5,822,134) fail to disclose or suggest the following structure of the vessel, said upper side and said lower side have a higher thermal conduction in an area of said center axis than in an area adjacent said outer edge.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lisa Herring whose telephone number is 571-272-1094. The examiner can normally be reached on Mon-Fri. 7am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

L. Herring
Patent Examiner
Art Unit 1731


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